MULTI-CD CONTROL FM/MW/LW
TUNER DECK AMPLIFIER

AMPLIFICATEUR PLATINE DE
SYNTONISATION FM/PO/GO
DE COMMANDE MULTI-CD

OWNER'S MANUAL
MODE D'EMPLOI

Thank you for purchasing this PIONEER product. Before attempting operation, be sure to read this manual.

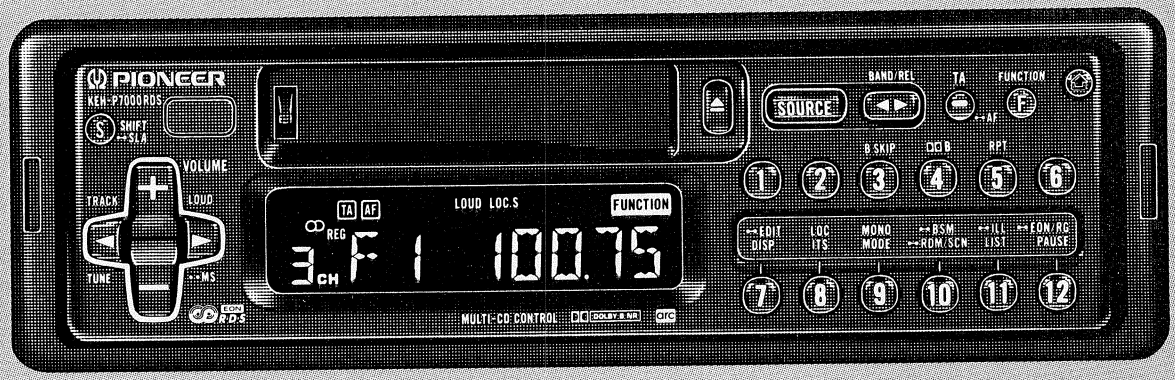
Grazie per aver acquistato questo prodotto PIONEER. Leggere attentamente queste istruzioni prima di usare questa unità.

Nous vous remercions d'avoir acheté cet appareil PIONEER. Avant de l'utiliser, prendre soin de lire ce manuel.

Vielen Dank für den Kauf dieses PIONEER Produkts. Diese Bedienungsanleitung vor der Inbetriebnahme sorgfältig durchlesen.

Dank U zeer voor de aanschaf van dit PIONEER-produkt. Lees deze gebruiksaanwijzing goed door, voordat het toestel in gebruik genomen wordt.

Muchas gracias por la adquisición de este producto PIONEER. Antes de tratar de operarlo, lea atentamente este manual.



PIONEER®

The Art of Entertainment

KEH-P7000RDS

ENGLISH

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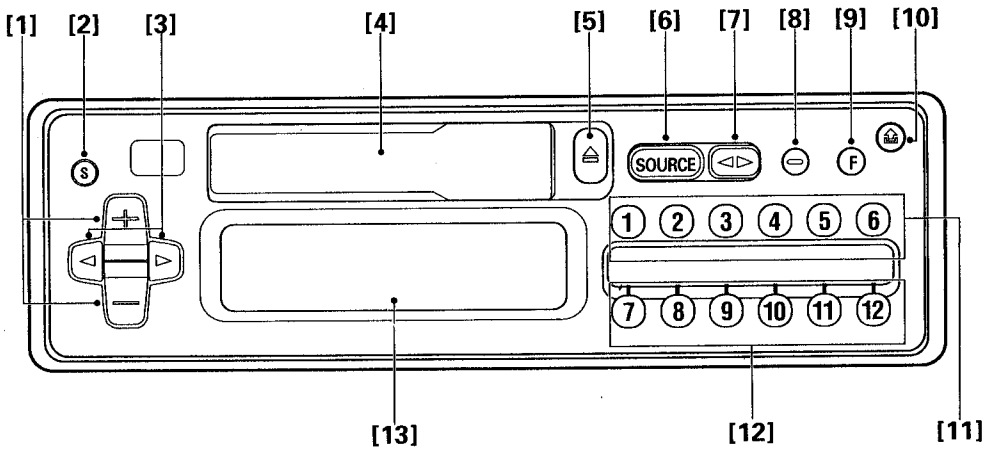


Fig. 1. Abb. 1.

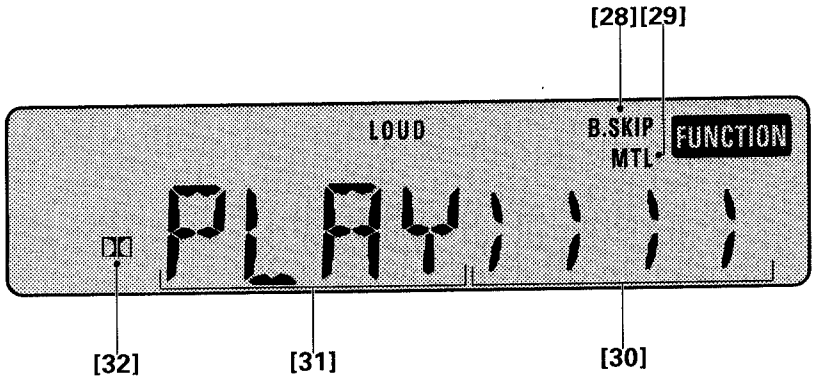


Fig. 3. Abb. 3.

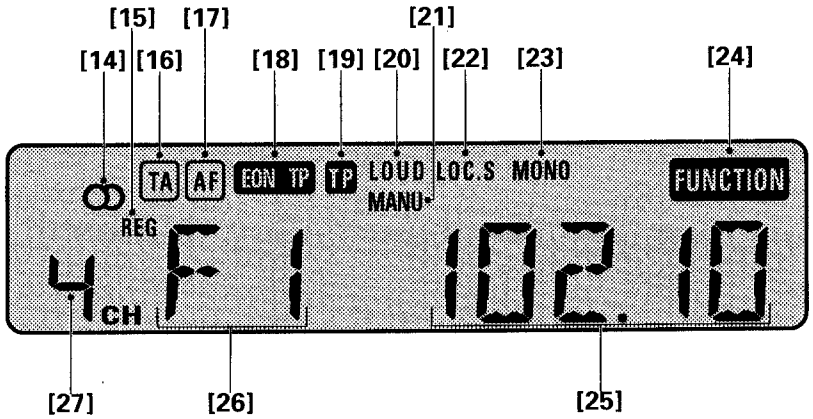


Fig. 2. Abb. 2.

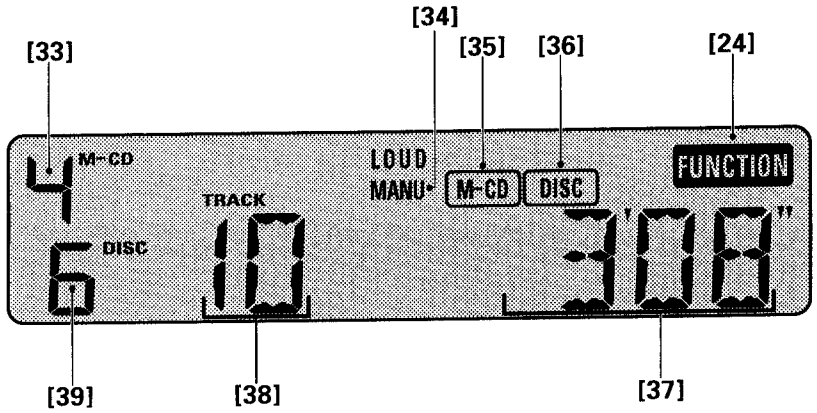


Fig. 4. Abb. 4.

Precautions

- *The "Pioneer Car Stereo - Pass" can be used only in Germany.*
- *If the car's battery is disconnected for any reason, the preset memory will be erased and must be reprogrammed after reconnection of the battery.*

In case of trouble
When the unit does not operate properly, contact your dealer or the nearest authorized PIONEER Service Station. Never remove the top case of the unit to attempt check or repairs.

Using the Removable Front Panel

Parts Identification

Fig. 1
[5] Eject
[10] Detach button
[11] ③ Buzzer ON/OFF

The front panel of this unit can be removed as a theft deterrent.
Also, to prevent forgetting to remove the front panel, 5 seconds after the ignition is turned off, if the front panel is still attached, a buzzer will sound for a few seconds.
If you wish to cancel the sound of the buzzer, please do as follows. Keep button ③ in Bank [11] depressed and turn the vehicle's ignition key from OFF to ON. By repeating this procedure, the sound of the buzzer will be restored.

Detaching the Front Panel

1. Press button [10], and the right-hand side of the panel will eject.
2. To remove the front panel, pull its right-hand side toward you. (Fig. 5)

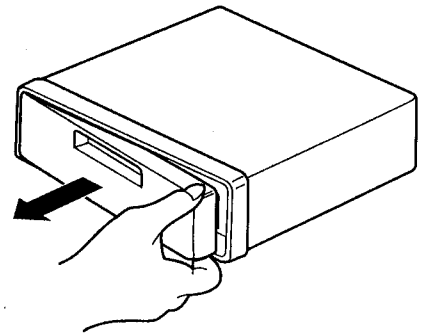


Fig. 5

- *Take care not to put pressure on the display or drop the front panel.*

3. Enclose for safekeeping the front panel that is removed in the supplied protective case. (Fig. 6)

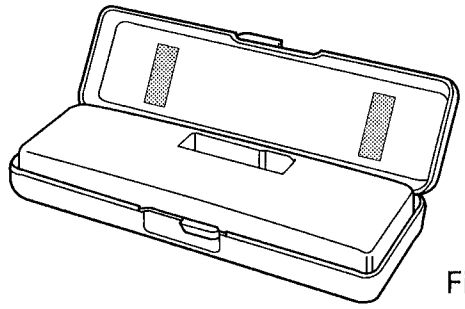


Fig. 6

Replacing the Front Panel

Push the front panel into the main body. (Fig. 7) (Fig. 8)

- *When replacing the front panel, do not put pressure on the display or control buttons.*

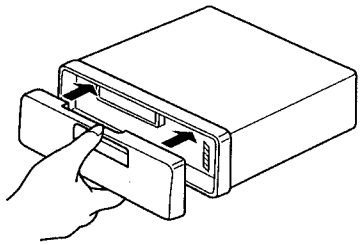


Fig. 7

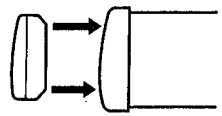


Fig. 8

- *Install the front panel holding it parallel to the main unit. Installing the panel tilted, as shown in the illustrations below, may cause the hook on the front panel to destroy the main unit's electrodes. (Fig. 9) (Fig. 10) (Fig. 11)*

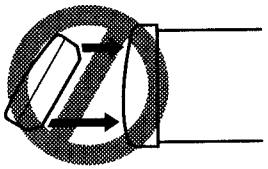


Fig. 9

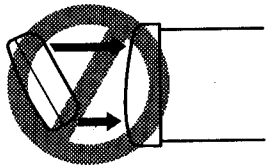


Fig. 10

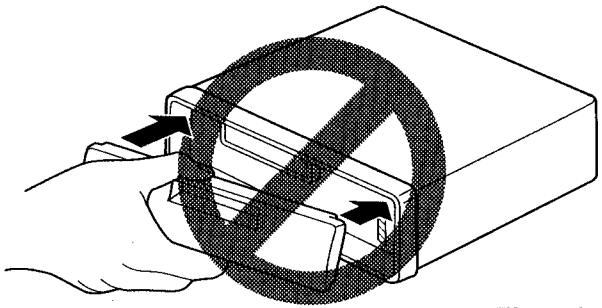


Fig. 11

- *Do not install the front panel while holding down buttons [5] and [10] in Fig.1. Doing so may destroy the buttons and the main unit.*
- *Note that if the front panel is not attached correctly, pushing button [10] may not release the panel, and the other control buttons may not function.*

Precautions

- *Do not touch the contacts on the front panel or on the unit body, since this may result in poor electrical contact. If dirt or other foreign substances get on the contacts, wipe them with a clean, dry cloth. (Fig. 12) (Fig. 13)*

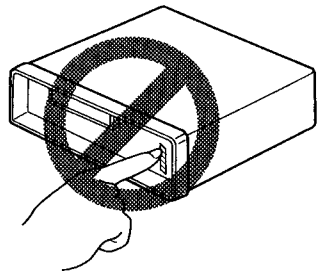


Fig. 12

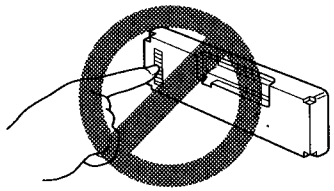


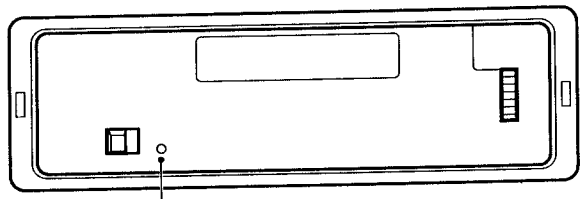
Fig. 13

Precautions When Handling the Front Panel

- *Do not leave the front panel in any area exposed to high temperatures or direct sunlight.*
- *Do not drop the front panel or otherwise subject it to strong impact.*
- *Do not allow such volatile agents as benzine, thinner, or insecticides to come into contact with the surface of the front panel.*
- *Never try to disassemble the front panel.*

Using the Clear Button

- The clear button can be located on the unit after you have removed the front panel. (Fig. 14)
  Refer to the previous page to find out how to remove the front panel.



[40] Clear Button

Fig. 14

Once all wiring is complete, press button [40] with a thin, pointed object. Though not a normal occurrence, the microprocessor which controls the operation of this unit can be affected by electrostatic noise. This generally is indicated by such symptoms as no power being supplied when you switch the unit on, failure of buttons and controls, or an abnormal display. Should this happen, press button [40] with a thin, pointed object to reset the microprocessor.

Adjusting Volume and Tone

Parts Identification

Fig. 1

[1] Volume/Audio adjustment
[2] Shift/Source level adjuster
[4] Cassette door
[5] Eject
[6] Source selector
[12] ⑦ AUX ON/OFF
[12] ⑪ Illumination switch
[13] Display

Switching Power On

Radio

Press button [6] to switch the tuner power on. Press button [6] again to switch the power off.

Tape

Insert the cassette tape through the cassette door [4], and the power will be automatically turned on to get the tape start being played back. To eject the tape, press the button [5].

Changing the Source

When the cassette tape is inserted, the source changes at each press of the button [6]: Tape → Radio → OFF.
When an optional multi-play CD player (CDX-P1200 or CDX-P600) is connected to your unit, the source changes thus:
Tape → Radio → Multi-play CD player → OFF.
If another audio equipment is connected to the IP-BUS terminal with an optional conversion cord, set the AUX to ON by doing as follows.
Hold down button ⑦ in Bank [12] and set the ignition switch from OFF to ON.
In this case, the source changes as follows:
Tape → Radio → (Multi-play CD player) → AUX → OFF

Adjusting Audio

Press button [1] to adjust the volume. Each press of button [2] changes the display and the function of button [1] as follows:
Volume → Fader (Balance) → Pre-Fader → Bass (Middle, Treble) → Loudness (ON/OFF).

- If the (◄) or (►) side of button [3] is pressed when "FAD" is shown on the display, it changes to "BAL", and the balance can be adjusted. To switch from Balance to Fader, press the (+) or (–) side of button [1], and the display and button [1] function becomes Fader.
- When "BAS" is displayed, the tone changes each time the (►) side of button [3] is pressed as follows: "BAS"→"MID"→"TRE". When "TRE" is displayed, the tone changes each time the (◄) side of button [3] is pressed as follows: "TRE"→"MID"→"BAS".

Adjusting Volume

Pressing the (+) side of button [1] increases the volume, while the (–) side decreases it.
(Display shows "VOL 00" ~ "VOL 30".)

- *When driving your vehicle, be sure to keep the volume of the unit set low enough to allow you to hear sounds coming from outside.*

Adjusting the Fader

This fader controls the balance between speakers ① and speakers ②, which are shown in Figure 15 on page 7. Press the (+) side of button [1] to raise the volume of speakers ① only; press the (–) side to raise the volume of speakers ② only.
(Display shows "FAD F9" ~ "FAD R9".)

- Please set "FAD 0" when using a 2-speaker system.

Note:
This unit has a fader that controls the balance between speakers ① and ②, shown in Figure 15 on page 7, using button [1], and a pre-fader that controls the balance between speakers ① and ② and speakers ③.

Adjusting Balance

Pressing the (◄) side of button [3] shifts the balance to the left speaker, while the (►) side shifts it to the right speaker.
(Display shows "BAL L9" ~ "BAL R9".)

Adjusting Pre-Fader

This pre-fader controls the balance between speakers ① and ②, and speakers ③, which are shown in Figure 15 on page 7. Press the (+) side of button [1] to raise the volume of speakers ① and ② only ; press the (–) side to rise the volume of speakers ③ only.
(Display shows "P-FAD –9"~"P-FAD +9".)

Adjusting Bass

Pressing the (+) side of button [1] increases bass, while the (–) side decreases bass.
(Display shows "BAS –6" ~ "BAS +6".)

Adjusting Middle

Pressing the (+) side of button [1] increases middle, while the (–) side decreases middle.
(Display shows "MID –6" ~ "MID +6".)

Adjusting Treble

Pressing the (+) side of button [1] increases treble, while the (–) side decreases treble.
(Display shows "TRE –6" ~ "TRE +6".)

Using the Loudness Control

Pressing the (►) side of button [3] turns the loudness function on, and "LOUD" [20] ap-

pears on the display. Pressing the (◄) side of button [3] turns it off. This loudness function supplements the insufficiency of low-and high-frequency ranges when the volume is low.

- *When you're adjusting fader, balance, pre-fader, bass, middle or treble settings, the indicator will stop at the center setting. About 8 seconds after adjustment has been made, the display returns to its previous state.*

Using the Fader

This unit has two faders: a fader and a pre-fader.

Fader

The fader controls the balance between the front and rear outputs of the built-in amplifier. (See Fig. 15 and "Adjusting the Fader" on page 6.)

Pre-Fader

The pre-fader controls the balance between the output of the built-in amplifier and the pre-out output.
(See Fig. 15 and "Adjusting the Pre-Fader" on page 6.)

Using Source Level Adjuster

You may wish to adjust volume when you have changed the source to radio, tape, or CD or AUX or when you have changed the radio band from FM to MW/LW. You can do so on the basis of the volume of FM as follows:

1. Use the button [6] to change the source. (In case of radio, change the band to MW/LW.)
2. Hold down the button [2] for about 2 seconds, and the display will show you the volume of the source. (Display shows "V –4" ~ "V +4".)

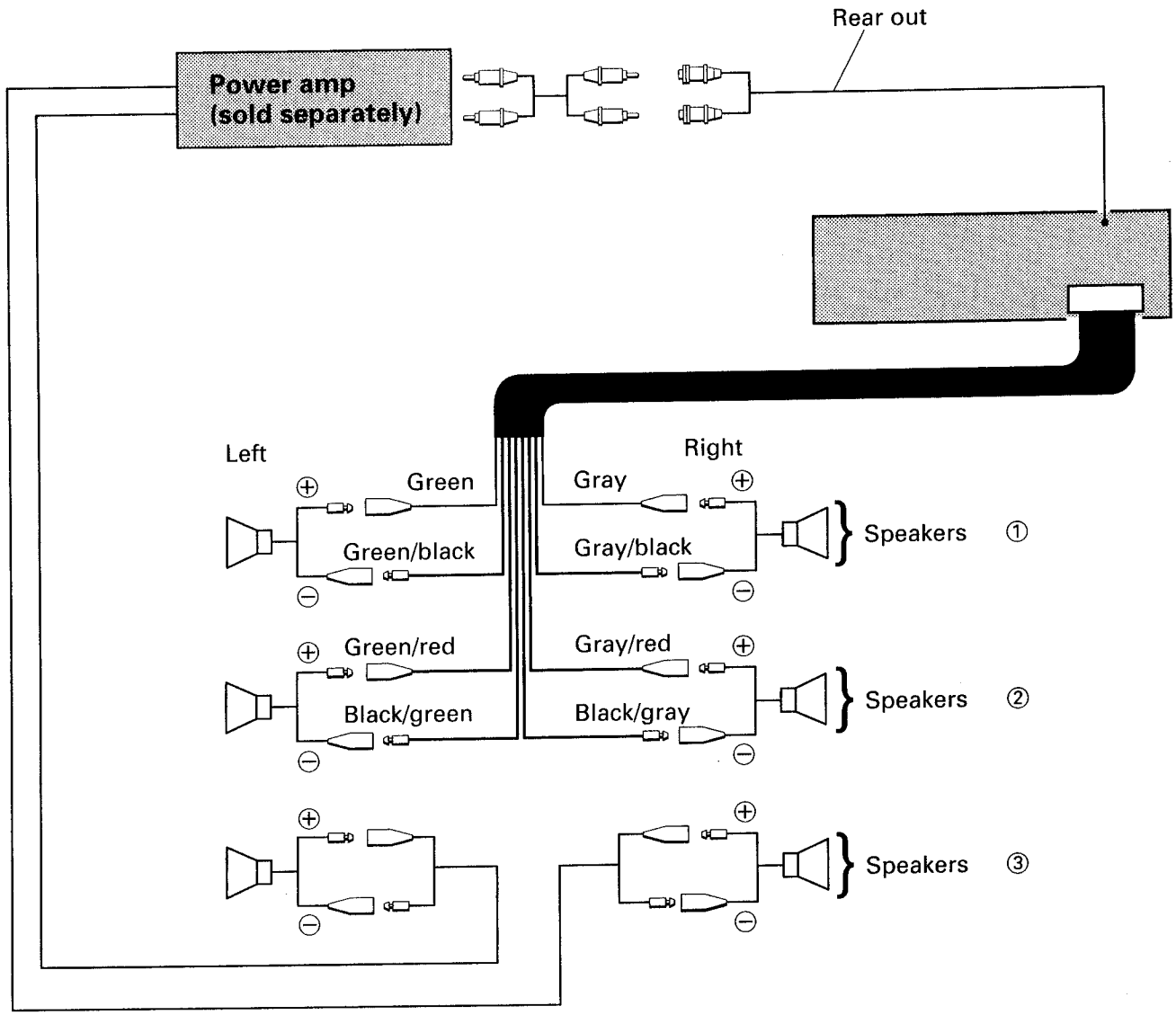


Fig. 15

3. Pressing the (+) side of button [1] raises the volume and pressing the (–) side lowers it. About 8 seconds after the completion of the adjustment, the display returns to whatever it was showing before the adjustment.

- No adjustment can be made when an FM station is tuned in.

Switching Illumination Color

You can select either green or amber for the switch illumination color. To switch the color, hold down button ⑪ in Bank [12] for 2 seconds.

Using the Radio

Parts Identification

Fig. 1

[3] Tuning/Seek, Manual
[6] Source selector
[7] Band
[8] TA/AF
[9] Function ON/OFF
[11] Preset
[12] Preset (FM1)
[12] ⑦ Frequency display
[12] ⑧ Local Station/Local seek sensitivity
[12] ⑨ FM stereo/mono
[12] ⑩ Best Stations Memory (BSM)/Preset scan
[12] ⑫ EON/Regional (REG)
[13] Display

Fig. 2

[14] FM stereo
[15] REG
[16] TA
[17] AF
[18] EON TP
[19] TP
[21] Manual
[22] Local Station
[23] FM mono
[24] Function Indicator
[25] Frequency
[26] Band
[27] Preset number

Listening to the Radio

- **Electronic Tuner**

Frequency allocation differs depending upon the area. This unit has been designed in accordance with the frequency allocations for Western Europe, Asia, the Middle and Near East, Africa, Australia and Oceania. Use in other areas may result in improper reception of AM.

1. Press button [6] to switch the radio power on.

2. Press button [7] to select a band.

F1 → F2 → M/L
(FM1) (FM2) (MW/LW)

When the frequency is changed with button [3], MW (531-1,602 kHz) and LW (153-281 kHz) are switched automatically.

3. Use seek tuning to tune in a frequency.

Ensure that "MANU" [21] is not indicated on the display. (If so, turn it off by simultaneously pressing the (◄) and the (►) sides of button [3].) Press either the (◄) side or the (►) side of button [3].
When the (►) side is pressed, the tuner will automatically receive high frequencies.
When the (◄) side is pressed, it will automatically receive low frequencies.

4. Adjust volume and tone (see page 6).

5. Assign the tuned frequency to one of the buttons in Bank [11] (the buttons in Bank [12] are also used in FM1) (Preset memory).

Press and hold down one of the button in Bank [11] (FM1:[11] and [12]) for at least two seconds. The frequency is assigned to the selected button when the preset number [27] stops flashing on the display. Up to 18 FM stations (12 for FM1 and 6 for FM2), and 6 MW/LW stations can be assigned to the preset memory buttons in Bank [11] (FM1:[11] and [12]).

6. Once a frequency is assigned to a button in Bank [11] (FM1:[11] and [12]), you just need to press that button to tune it in.

This also causes the number of the button pressed to appear at position [27] on the display.

Manual Tuning

Use manual tuning when stations are too weak to be picked up by seek tuning.

1. Turn on "MANU" [21] by simultaneously pressing the (◄) side and the (►) side of button [3].
2. Each press of the (►) side of button [3] increases the frequency in 50 kHz steps in the FM band, 9 kHz in the MW band and 1 kHz in the LW band.
   Pressing the (◄) side of button [3] decreases the frequency. Holding down either side of button [3] changes the frequency at high speed.

Function Mode

The button in Bank [12] can be used as the function button. Since 12 stations can be preset for FM1, the function is turned on or off with button [9]. (When the function is on, button [9] lights in yellow, and when it is off, it lights in red.) Since only 6 stations can be preset for FM2 and MW/LW, the function is automatically turned on. When the function is turned on, subsequent operations can be performed.

Adjusting Seek Sensitivity

The seek tuning function of this tuner lets you select between a local setting for reception of strong stations only, and a DX (distant) setting for reception of weaker stations. The local setting also has four seek tuning sensitivity levels for FM and two levels for MW/LW to match local conditions.

Changing the Local Seek Sensitivity

1. Use button [7] to select a band.
2. Hold down the button ⑧ in Bank [12] for more than two seconds, and the display will show you the current local seek sensitivity for about 5 seconds.
3. While the local seek sensitivity remains on the display, press the (►) side of button [3] to increase the sensitivity level, and the (◄) side to decrease the level as shown below.
   FM : LOC-1 ⇄ LOC-2 ⇄ LOC-3 ⇄ LOC-4
   MW/LW: LOC-1 ⇄ LOC-2
   The LOC-4 setting allows reception of only the strongest stations, while lower settings let you receive progressively weaker stations.

- The display of local seek sensitivity returns to the frequency when about 5 seconds have elapsed after the change of sensitivity.

Switching between Local and DX

Press button ⑧ in Bank [12] to switch between Local and DX (distant) seek tuning. When "LOC.S" [22] is shown on the display, seek tuning is performed with the local seek sensitivity. Otherwise, seek tuning is performed with the DX seek sensitivity.

Switching between FM Stereo and Mono

Generally, it is best to allow the ARC (Automatic Reception Control) function to automatically set the optimum listening conditions. When stereo broadcasting is received, "◯◯" [14] will appear on the display. When there is a large amount of noise, you can press button ⑨ in Bank [12] for clearer mono reception ("MONO" [23] will appear on the display).

BSM (Best Stations Memory)

This function automatically locates stronger stations and automatically assigns their frequencies to the buttons in Bank [11] (FM1: [11] and [12]), from strongest to weakest. It comes in handy when trying to find local stations while driving.

1. Press button [7] and select a band.
2. Holding down button ⑩ in Bank [12] for about two seconds will start BSM search. At this time, "BSM" will flash on the display.
3. The frequency display will return once BSM search is complete, and frequencies are assigned to buttons ① through ⑥ (FM1:① through ⑫) in Bank [11] (FM1: [11], [12]).

- At the end of the BSM search, the displayed frequency is that assigned to button ① in Bank [11].
- You can cancel BSM search by pressing button ⑩ in Bank [12] again.
- *If there are fewer than 6 (FM1:12) strong stations in the area, some of the buttons in Bank [11] (FM1:[11], [12]) will not be assigned frequencies, so they will retain any frequencies assigned to them previously.*
- *BSM search may take as long as 30 seconds in areas where there are few strong stations.*

Preset Scan Tuning

This function lets you automatically monitor the stations assigned to the preset buttons.

1. Press button ⑩ in Bank [12]. The frequency will appear on the display [25] and the preset number [27] will light up. Each station assigned to the buttons in Bank [11] (FM1:[11], [12]) will be automatically tuned in for about 8 seconds.
2. When you hear a station that you like, press button ⑩ in Bank [12] again to cancel preset scan tuning and remain at that station.

Using the RDS Function

What is RDS?

RDS (Radio Data System) according to a CENELEC EN50067 is a system for transmitting data signals from FM broadcast transmitter along with the normal sound program. These data signals, which are imperceptable to listeners, are intended to aid radio listeners in tuning their receivers to a desired station. RDS receivers can decode these data signals for display or control purposes.

RDS digital signal includes various data, such as PI, PS, AF, TP, TA and EON.

PI.....Program Identification Code
PS.....Program Service Name
AF.....List of Alternative Frequencies
TP.....Traffic Program Identification Code (Similar to SK signal of ARI system)
TA .....Traffic Announcement Code (Similar to DK signal of ARI system)
EON .....Enhanced Other Network Information Code.(In some countries. EON is not offered by broadcasters.)

RDS Function of this Unit

This unit has the following functions for making use of RDS data.

- PS, the name of the currently listened station is displayed.
- AF (Alternative Frequency) function. This enables the receiver to automatically retune to more suitable frequencies transmitting the same program.
- TP/TA, EON, user selectable reception of the traffic information service, offered by RDS.

Network/Station Name Display

Switch the tuner on and choose one of the two FM bands.

When you tune into an RDS station with manual or seek tuning, the frequency display changes to the network/station name display after a few seconds by means of the PS code.

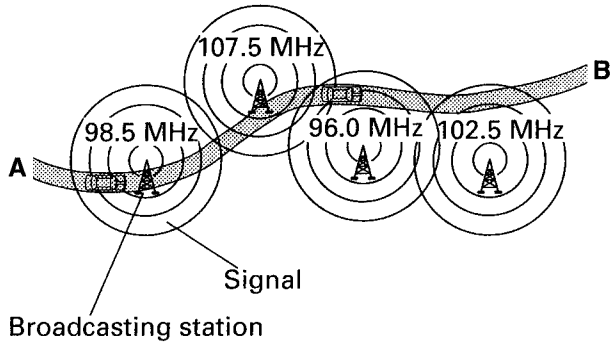
- The RDS functions of this unit use RDS codes transmitted along with FM broadcasts. RDS doesn't work on the MW or LW bands.
- The RDS functions may not work properly in areas where the RDS transmissions are at an experimental stage or where there are flaws in the broadcasting system.
- Hold down button ⑦ in Bank [12] for more than 2 seconds to change the network/station name display to the frequency display. The frequency will be displayed only while the button is being held down.

AF Function

This receiver retunes automatically to a more suitable transmitter, contained in the list of Alternative Frequencies (AF), to enable the motorist to keep listening to programs in the same network.

Example:

If a motorist travels as shown below, from point A to point B, (and has selected AF function) then the receiver will automatically retune to a more suitable frequency transmitting the same program. This is shown by the automatic retuning from 98.5 MHz to 107.5 MHz to 96.0 MHz to 102.5 MHz.



To activate the Alternative Frequency Function, holding down button [8] for about 2 seconds, "AF" [17] will appear on the display. Once tuned to a RDS station, as long as you drive within an area served by the same network, the receiver will automatically retune to a more suitable station transmitting the same program, by utilizing the data in the AF list.

- "PI SEEK" will appear on the display, if the AF function has been selected, and a suitable AF station cannot be found. In this case, the receiver will mute the radio sound and search the frequency band, in order to find a station with the same PI

code. The receiver will return to the original frequency if the same or related PI code can not be found.

- The AF function will not work in the following cases:
  — when the receiver is tuned to a non-RDS station. (local station)
  — when the RDS station does not transmit any AF list data.
  — when the receiver can not receive the AF list due to disturbances.

  When the receiver is unable to find a PI code the "AF" [17] indicator will flash on the display.
  Thus indicating that the AF function cannot be performed.

Preset recall

- When recalling preset stations in the AF mode, the tuner will be tuned to the stored frequency and the AF function will be operative i.e. when the signal of the recalled station is weak or has a different PI, the radio will look into the AF list and if necessary start a PI-seek in order to find a station with the same or related PI code. When the tuner is performing a PI seek "PI SEEK" is shown on the display. If the PI seek is successful, the tuner will be tuned to the new frequency that transmits the same programme service (i.e. with the same PI code) and the display will show the stored PS. If the PI seek is not successful, the tuner will return to the stored frequency. If a new station (with a different PI code) would be received on this frequency, this station will become audible. The display will show the frequency instead of PS.
- When recalling preset stations in the AF=OFF mode, the tuner will be tuned to the stored frequency and the display will show the stored PS. In case the tuned station has a PI code that is different from the stored one, the tuner will accept the new PI code and stay tuned to the initial frequency. The display will show the new PS when the signal of the tuned station is strong enough.

Listening to Regional Stations

In some countries a particular programme service may "opt out" during a certain part of the day in several regional variants at particular locations. Since these regional variants are broadcasting a different programme they temporally have a PI and a PS that is different from the main programme service. The PI's are mostly "generically linked". The AF list may either be common for all regional variants or each regional variant may have its own AF list.
In other countries there may be regional stations which are not an "opt out" of a particular main programme service but which have an independent existence. These regional stations all have a different PS. Their PI's may be "generically linked" and their AF lists may carry frequencies which are alternatives for that regional station only.

1) Regional OFF Mode

In the default condition, when the button [8] is held down for about 2 seconds to switch it ON, the receiver is in the REG OFF mode. In this case the receiver will switch automatically to regional variants of the tuned programme service along the journey. This is of benefit when the regional variants just carry the same programme, but will become annoying if the receiver switches back and forth between different programmes. In this case it is recommended to put the receiver in the REG ON mode.

2) Regional ON Mode

When the radio is put in the REG ON mode, the radio will remain tuned to a specific regional variant as long as it is available. To put the radio in the REG ON mode, hold down button ⑫ in Bank [12]. "REG" [15] will appear on the display.
To cancel the REG ON mode i.e. to put the radio back in the default REG OFF mode, hold down button ⑫ in Bank [12] again. "REG" [15] will disappear from the display.

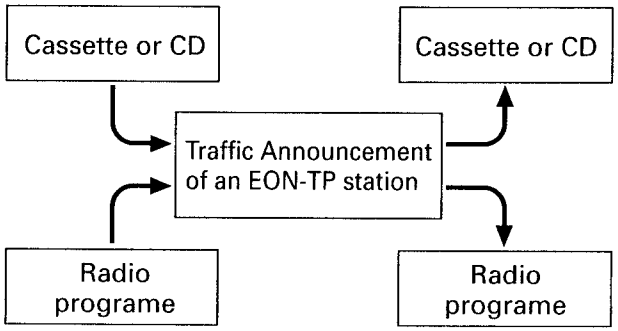
Traffic Information Reception

TP and EON-TP function

When a traffic information station (TP station) is selected, "TP" [19] lights on the display, thus indicating traffic report can be received through this station. The "EON TP" [18] indicator will light on the display when a selected station (this network) is broadcasting EON information which cross-references at least one program service which carries traffic information, thus indicating traffic report can be received through another program service by using the EON function of this unit.
In both cases, by briefly pressing button [8], Traffic report waiting status will be entered. However, if you wish not to interrupt your radio program (eg: classical music program) by traffic report, the EON function of this unit can be set to OFF. Pressing button ⑫ in Bank [12] for more than 2 seconds, changes the status of the EON function, EON-ON ⇆ EON-OFF.
This indication is shown on the display for

approximately 3 seconds.
If only the "EON TP" [18] indicator is on but the EON function of this unit is OFF, it is not possible to receive traffic report through another program service. In this case, "TA" [16] (if traffic report waiting status is set to ON) will flash on the display to indicate this situation.

Traffic information reception by EON-TP



Traffic Announcement Volume Adjustment

- The volume of the traffic announcement is temporarily stored in memory. The next time a report is received, the volume will be at the previous setting. However, if the volume of the traffic reception is below Vol 15, the volume will not decrease, and the preset volume of the traffic reception will be set to Vol 15.

TA Reception during CD or Cassette Play

- If the radio is already set to the FM band and tuned to a TP or EON-TP station, even when listening to the cassette or the multi-play CD player, when the button [8] is pushed ("TA" [16] is shown on the display), traffic report waiting will begin. When a traffic report begins, the system will switch from cassette or CD to the traffic report.

BSA function

- While button [8] is on, ("TA" [16] is shown on the display) and AF function is off, and you are listening to either the cassette or multi-play CD player, should the TP station become weak, the radio will start BSA (Best TP Station Auto Search) 10 seconds after "TP" [19] disappears from the diplay. The tuner will automatically tune to the strongest TP station in the area, and will stand by for a traffic bulletin. BSA does not work when the AF function is selected, so turn the AF function off by pressing button [8] for about 2 seconds when you want to use BSA.

TP Alarm Function

- In AF mode, about 30 seconds after "TP" [19] disappears from the display, which occurs if the signal from the TP station becomes weak, an alarm sounds for 10 seconds to tell you to tune to another TP stations.

Tuning Functions on each RDS modes

Tuning Mode	AF Mode	TA Mode & AF plus TA Mode
Seek Tuning will stop to find,	RDS Stations	TP or EON-TP Stations
BSM will select and memorize in presets,	RDS Stations	TP Stations

Non-RDS station such as those using the Swedish MBS system may be tuned in as RDS station, but this is due to both systems using the same 57 kHz subcarrier frequency and is not a mulfunction of the unit.

Tuning Steps

The tuning step is normally 50 kHz during seek tuning on an FM band. However this tuning step changes to 100 kHz when the set is in AF or TP mode. In some countries it may be desired to set a tuning step of 50 kHz in AF mode by holding down the button ① in Bank [11] while turning the ignition key from OFF to ON.

- During manual tuning, the step does not change; it remains fixed at 50 kHz.
- The tuning step will return to 100kHz if the batteries supply is temporarily disconnected or the clear button is pressed.
- In AF mode, only those stations being broadcast at 100 kHz steps are subject to AF reception (CENELEC STANDARD).

Using the Tape Deck

Parts Identification

Fig. 1
[3] Fast Forward, Rewind/Music search
[4] Cassette door
[5] Eject
[7] Direction change/Release
[11] ③ Blank Skip (B. SKIP)
[11] ④ Dolby B NR
[11] ⑤ Repeat (RPT)
[13] Display

Fig. 3
[28] Blank Skip (B. SKIP)
[29] Metal
[30] Tape running direction indicator
[31] Play indicator
[32] Dolby B NR

About Cassette Tapes

- *Do not use tapes longer than C-90-type (90 min.) cassettes. Longer tapes can interfere with tape transport.*
- *A loose or warped label on a cassette tape may interfere with the eject mechanism of the unit or cause the cassette to become jammed in the unit. Avoid using such tapes or remove such labels from the cassette before attempting use.*
- *Storing cassettes in areas directly exposed to sunlight or high temperatures can distort them and subsequently interfere with tape transport. (Fig. 16)*

Fig. 16

- *Store unused tapes in a tape case where there is no danger of them becoming loose or being exposed to dust.*

Cleaning the Head

If the playback head becomes dirty, sound quality will suffer. Periodically (once or twice a month) clean the head with a cotton swab soaked with alcohol. (Fig. 17)

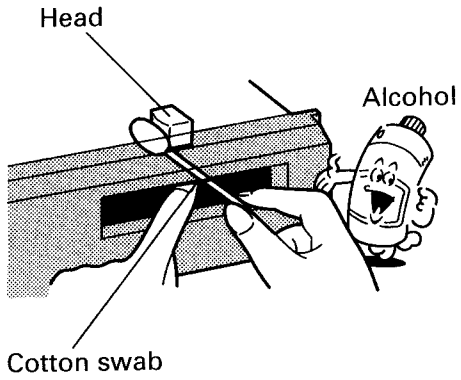


Fig. 17

Listening to a Tape

1. Insert the cassette tape into the slot [4], and power will be turned on and the tape begin being played back.
At this time, the tape running direction indicator [30] will light up.
2. Adjust volume and tone (see page 6).
3. To eject the cassette tape, press the button [5].
- *Do not try to eject the cassette immediately after insertion, as it will cause malfunction. Wait a few seconds.*

Changing Program

When button [7] is pressed, the tape switches from side A to side B (or from side B to side A). (If the button is pressed during fast forwarding or rewinding, the current side is played.)

Dolby B NR

To hear a tape recorded using a Dolby NR system, press the button ④ in Bank [11]. ("□□" [32] appears.)
- Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol □□ are trademarks of Dolby Laboratories Licensing Corporation.

Using Fast Forward and Rewind

1. To fast forward tape, press the (►) side of the button [3].
(Display shows "FF".)
To rewind tape, press the (◄) side.
(Display shows "REW".)
2. To release the fast forward or rewind function, press the button [7].

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Using Music Search

1. To repeat the current selection (A), press the (◄) side of the button [3] two consecutive times.
   (Display shows "R-MS".)
   To hear the following piece of music (B) rather than continue the current selection, press the (►) side of the button [3] two consecutive times.
   (Display shows "F-MS".)
   Pressing the button [3] three consecutive times makes the normal sequence of playing resume.
2. To release the music search function, press the button [7].

The following errors will cause the music search function to operate improperly, even though the unit is not malfunctioning.

- *Unrecorded blank portion between selection is less than 4 seconds → the blank portion cannot be detected by the unit.*
- *Pauses in recorded conversations are longer than 4 seconds → the unit reads these as blanks between selections.*
- *Portions are recorded at very low volume for more than 4 seconds → the unit reads these as blanks between selections.*

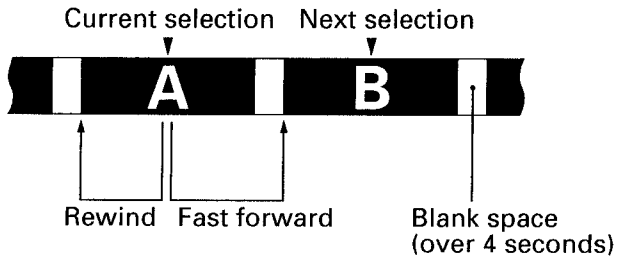

Fig. 18

Auto Tape Selector

When a cassette tape is inserted, the automatic tape selector determines the tape type, and switches between 70 μs and 120 μs equalization. When it is a metal or chrome tape, "MTL" [29] comes on. When it is a normal tape, nothing comes on.

Using the blank skip function

Automatically carriers out fast forward to the start of the next selection when there is a blank area of 12 seconds or more between selections.

1. Press button ③ in Bank [11] until "B. SKIP" [28] appears.
2. To release the blank skip function, press button ③ in Bank [11] again.

Using the Music Repeat Function

Lets you listen to the same selection repeatedly.

1. Press button ⑤ in Bank [11] when you are listening to the track to be repeated until "RPT" appears on display [31].
2. To cancel the music repeat function, press button ⑤ in Bank [11] again or press button [7].

Playing Compact Discs

Precautions When Using the Multi-Play CD Control

- If the IPS-BUS extension adapter is used, up to 4 multi play CD players can be connected. When two or more CD players are connected, their priorities must be specified for the Multi-play CD players. See the Multi-play CD players instructions and set the address switches correctly.
- Use this unit with optional multi-play CD players (CDX-P1200 or CDX-P600).
- If two or more multi-play CD players are connected to the unit, you can select the CD player to be played.
  Each press of button [7] switches between the CD players and magazine number [33] on the display.

Parts Identification

Fig. 1
[3] Track number search/Fast Forward, Reverse
[6] Source selector
[7] Multi-play CD player select
[9] Function ON/OFF
[11] Disc number search
[12] Disc number search
[12] ⑦ Display selector/Edit
[12] ⑧ ITS (Instant Track Selection)/program clear
[12] ⑨ Play mode switching/ITS play
[12] ⑩ Scan /Random play
[12] ⑪ Title list
[12] ⑫ Pause
[13] Display

Fig. 4
[24] Function indicator
[33] Magazine number
[34] Manual
[35] Magazine repeat mode
[36] Disc repeat mode
[37] Elapsed play time display
[38] Track number
[39] Disc number

Using the Multi-Play CD Player

1. Press button [6] to change the display to the multi-play CD player mode and to begin disc play.
Each press of button [6] changes the mode as follows:
Tape → Radio → Multi-play CD player → OFF

2. Use the Disc Number Search function to select a disc.
Select the desired disc by pressing one of the button in Bank [11], [12]. The number of the disc selected appears at position [39] on the display.

- If the number at position [39] on the display does not change when you press a button in Bank [11], [12], it means that there is no disc loaded in that tray.

3. Adjust volume and tone (see page 6).

4. To stop disc play, press button [6].
At another press, the normal play resumes from about where it stopped.

Note:
- It takes about 30 seconds from setting the magazine in the multi-play CD player till the start of CD playback. ("READY" appears on the display.) This does not indicate a problem; it is just for verifying there a disc in the magazine.
- When the multi-play CD player is not working corrently, an error message appears on the display (Ex: "ERROR-80"). Identify the error from the multi-play CD player owner's manual.
- After you press a button in Bank [11], [12], it may take some time before play begins due to the time necessary to load and set the disc in the mechanism.

Track Number Search

The desired track on the disc currently being played can be selected by track (or song) number.
Make sure "MANU" [34] is not displayed on the display. If it is, press the (◄) and (►) sides of button [3] at the same time to turn it off.
Press the (►) side of button [3] to increase the number at Position [38], or the (◄) side to decrease the number. Holding either side of button [3] down changes the track number at high speed.

Using Fast Forward and Reverse

1. Press the (◄) and (►) sides of button [3] at the same time. "MANU" [34] appears on the display.
2. Press the (►) side of button [3] for fast forward, and the (◄) side for reverse.

- Sound is output during fast forward and reverse operations.

Function Mode

If the 12-disc magazine CD player CDX-P1200 is combined with this unit, button [12] acts as the disc number search button. Press button [9] to switch between the function mode and disc number search button. (When the function mode is on, button [9] lights in yellow, and when it is off, it lights in red.)
When the function is turned on, subsequent operations can be performed.

Repeat

You can select one of the play modes (repeat modes) listed below.

Play mode (repeat mode)	Operation
One-Track Repeat	Play the current track repeatedly. • When you perform track number search or fast forward or rewind, the mode changes to disc repeat mode. • Switching the multi-CD player being played or the disc switches to magazine repeat mode.
Disc Repeat	Play the same disc repeatedly. • Switching the multi-CD player being played or the disc switches to magazine repeat mode.
Magazine Repeat	Play all discs loaded in the magazine in the multi-play CD player repeatedly. All discs in the magazine are played repeatedly from the first disc.
ALL Repeat	The mode changes to this mode when 2 or more multi-play CD players are connected. Multi-play CD players 1 to 4 are played.

Each press of button ⑨ in Bank [12] causes the mode to change as follows:
One-Track Repeat ("RPT" appears on the display [37]) → Disc Repeat ("DISC" [36] appears) → Magazine Repeat ("M-CD" [35] appears) → ALL Repeat

Random Play

The microcomputer of the multi-play CD player selects plays tracks on discs in random order. Random play is performed according to the current play mode (repeat mode) as follows:

Play mode (repeat mode)	Tracks to be played at random
One-Track Repeat	All tracks on the disc being played. • The play mode changes to disc repeat mode.
Disc Repeat	All tracks on the disc being played.
Magazine Repeat	All tracks on the discs in the magazine being played.
ALL Repeat*	All tracks on all discs in multi-play CD players 1 to 4.

* When 2 or more multi-play CD players are connected.

1. Select the desired random play mode (repeat mode). (See page 16.)
2. Hold down button ⑩ in Bank [12] for more than 2 seconds. ("RDM" appears on the display [37].) To cancel random play, hold down button ⑩ in Bank [12] for more than 2 seconds again. ("RDM" disappears.)

- Since selections are played in random order, the same selection may be played twice in succession.

Using Scan

The first parts of each track are played in succession for about 10 seconds. This function is useful to search for the track or disc you want to listen to. Scan is performed according to the current play mode (repeat mode) as follows:

Play mode (repeat mode)	Tracks to be scanned and played
One-Track Repeat	All tracks on the disc being played. • The play mode changes to disc repeat mode.
Disc Repeat	All tracks on the disc being played.
Magazine Repeat	The first tracks of all the discs in the magazine being played.
ALL Repeat*	First tracks of all discs loaded in multi-play CD players 1 to 4.

* When 2 or more multi-play CD players are connected.

1. Select the desired random play mode (repeat mode). (See page 16.)
2. Press button ⑩ in Bank [12]. ("SCAN" appears on the display [37].) The first parts of all tracks are played in succession for about 10 seconds.
3. When you hear the track you want, press button ⑩ in Bank [12] again to cancel Scan. ("SCAN" disappears.) The track (disc) being played is when played to the end.

- The previous function automatically resumes when a piece of music with which Scan began returns.

ITS (Instant Track Selection)

This function lets you program and play the tracks you want. You can listen to just your favorite tracks.

- The ADPS function* of the multi-play CD player lets you program up to 100 discs. (Up to 100 discs can be programmed including disc title inputs (see page 19).)
  * ADPS: Automatic Disc Program Selection
- Up to 99 tracks can be programmed for a single disc.
- When the number of discs exceeds 100, discs not being played (Information not being renewed) in memory is overwritten by the newest.
- Tracks are programmed for each disc. Programmed tracks are not erased after the disc is changed.

Programming

1. Play the track you want to program.
2. Press button ⑧ in Bank [12] to program the track.
   ("ITS" appears on the display [37] for 3 seconds.)

- Program tracks while ITS play is not in progress. It is possible during scan play or random play.

ITS Play

Track stored only in memory are played in order. Tracks are played according to ITS play mode (repeat mode) as follows:

Play mode (repeat mode)	Tracks to be played by ITS
One-Track Repeat	Programmed tracks on the disc being played. • The play mode changes to disc repeat mode.
Disc Repeat	Programmed tracks on the disc being played.
Magazine Repeat	Programmed tracks on the discs in the magazine being played. • If the disc being played contains no programmed tracks, the next disc containing programmed tracks is played.
ALL Repeat*	Programmed tracks on all discs in all magazines in multi-play CD players 1 to 4. • If the disc (multi-play CD) being played contains no programmed tracks, the next disc (multi-play CD) containing programmed tracks is played.

* When 2 or more multi-play CD players are connected.

1.Select the desired ITS play mode (repeat mode). (See page 16.)
2.Hold down button ⑨ in Bank [12] for more than 2 seconds. ("ITS.P" appears on the display [37].) To cancel ITS play, hold down button ⑨ in Bank [12] for more than 2 seconds again. ("ITS.P" disappears.)

- When you play a disc that has no tracks programmed, "EMPTY" will appear on the display [37] for about 3 seconds, indicating that ITS play is not possible.
- You can perform scan play or random play during ITS play. In this case, scan play or random play applies to all the tracks stored in memory. (If the play mode is the magazine repaet mode or all repeat mode, scan play applies to all the tracks of the discs in the magazine stored in memory.)
- During ITS play, multi-play CD players containing discs with programmed tracks are switched, and disc and track number search is performed on programmed tracks.

Erasing the ITS Program
You can erase one or all selections of the program for the disc being played by ITS.

To erase a single selection:
1.Start ITS play. (See page 18.)
2.Play the track you wish to erase by using disc number search or track number search.
3.Hold down button ⑧ in Bank [12] for more than 2 seconds. ("CLEAR" appears on the display [37] for about 3 seconds.)

To erase the disc program:
1.Start normal play.
2.Play the disc you wish to erase by using disc number search.
3.Hold down button ⑧ in Bank [12] for more than 2 seconds to erase the program. ("CLEAR" appears on the display [37] for about 3 seconds.)

Pausing

1.Press button ⑫ in Bank [12] to pause during disc playback ("PAUSE" appears on display [37]).
2.Press button ⑫ in Bank [12] again to release pause.

- You can select a track using the track number search during pause. ("PAUSE" is off while a track is being searched.) When the track search ends, the found track is paused at its betinning.

Disc Title Input

You can enter a title for the disc in the multi-play CD player. The title stored for the disc can be displayed.

- The ADPS function* of the multi-play CD player lets you enter titles for up to 100 discs. (Up to 100 discs, including ITS, can be programmed (see page 18).)
  *ADPS: Automatic Disc Program Selection
- A disc title can consist of up 8 characters for a single disc.
- When the number of discs exceeds 100, discs not being played (information not being renewed) in memory is overwritten by the newest.
- One title is stored for each disc. The title stored for a disc is not erased after the disc is changed.

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Entering Titles

1. Select the disc for which you want to enter a title.
2. Hold down button ⑦ in Bank [12] for more than 2 seconds to select title input mode.
3. Press the (◄) or (►) side of button [3] to select the input position. The input position moves continuously when you hold down either side of the button.

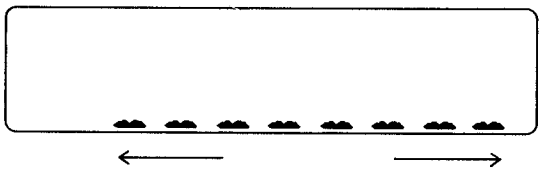

Fig. 19

4. Select characters using the (+) or (–) side of button [1]. When you hold down either side of the button, the character changes continuously. Each press of the (+) side changes the character from "A → B → C...", while each press of the (–) side changes the character from "C → B → A". To enter a space, press the space sign (_).
5. Enter all characters by repeating steps 3 and 4.
   Press button ⑦ in Bank [12] to store them in memory.
   The title will appear on the display.

Disc Title List

You can list all discs loaded in the magazine being played. This function is convenient for checking discs in the magazine being played.
Each press of button ⑪ in Bank [12] displays the titles of the discs in magazine being played in ascending order of disc number.
The disc title is displayed for about 8 seconds, then the normal operation display returns.

- *Nothing is displayed for discs having no titles.*
- *Trays with no discs are skipped.*

Select the disc to be played from the disc list display.

1. Press button ⑪ in Bank [12] to display the disc title.
2. When the title of the disc you want to listen to is displayed, press button ⑦ in Bank [12]. That disc is played.

Display Switching

Each press of button ⑦ in Bank [12] switches the display [37] between the elapsed play time and disc title.
When you press button [7] while the disc title is being displayed, the normal operation display will appear for 8 seconds.

Specifications

General

Power source ..... 14.4 V DC (10.8 — 15.6 V allowable)
Grounding system ..... Negative type
Max. current consumption ..... 6.0 A
Dimensions (chassis) ... 178 (W) × 50 (H) × 150 (D) mm
(front face) ... 188 (W) × 58 (H) × 15 (D) mm
Weight ..... 1.4 kg

Amplifier

Maximum power output ..... 22 W × 4 (EIAJ)
Continuous power output
..... 14 W × 4 (DIN 45324, +B = 14.4 V)
Load impedance ..... 4 Ω (4 — 8 Ω allowable)
Preout output level/output impedance
..... 500 mV/1 kΩ
Tone controls (bass) ..... ±12 dB (100 Hz)
(middle) ..... ±12 dB (1 kHz)
(treble) ..... ±12 dB (10 kHz)
Loudness contour ..... +10 dB (100 Hz), +7 dB (10 kHz)
.....(Volume: –30 dB)

Tape player

Tape ..... Compact cassette tape (C-30 — C-90)
Tape speed ..... 4.8 cm/sec.
Fast forward/rewind time ... Approx. 100 sec. for C-60
Wow & flutter ..... 0.09 % (WRMS)
Frequency response ... Metal: 30 — 19,000 Hz (±3 dB)
Stereo separation ..... 45 dB
Signal-to-noise ratio
..... Metal: Dolby B NR IN: 67 dB (IEC-A network)
.....Dolby NR OUT: 61 dB (IEC-A network)

FM tuner

Frequency range ..... 87.5 — 108 MHz
Usable sensitivity ..... 11 dBf (1.0 μV/75 Ω, mono, S/N: 30 dB)
50 dB quieting sensitivity ..... 16 dBf (1.7 μV/75 Ω, mono)
Signal-to-noise ratio ..... 70 dB (IEC-A network)
Distortion ..... 0.3 % (at 65 dBf, 1 kHz, stereo)
Frequency response ..... 30 — 15,000 Hz (±3 dB)
Stereo separation ..... 40 dB (at 65 dBf, 1 kHz)

MW tuner

Frequency range ..... 531 — 1,602 kHz
Usable sensitivity ..... 18 μV (25 dB) (S/N: 20 dB)
Selectivity ..... 50 dB (±9 kHz)

LW tuner

Frequency range ..... 153 — 281 kHz
Usable sensitivity ..... 30 μV (30 dB) (S/N: 20 dB)
Selectivity ..... 50 dB (±9 kHz)

Note:

Specifications and the design are subject to possible modification without notice due to improvements.